

ABSTRACT

Background : Cardiovascular disease is the most leading cause for mortality globally. It is estimated that around 17.5 million died due to CVD and its about 31% of all death globally. The risk of CVD and its mortality seems to be significantly raised in patients having type 2 diabetes mellitus when compared with normal individuals. A major contributor to the increased CVD among with type 2 diabetes is dyslipidaemia. NCEP ATP III emphasis the role of LDL-C in the pathogenesis of cardiovascular disease, but it has been recently suggesting that raised levels non-HDLc may be better in predicting risk associated with cardiovascular disease .

Aims and objectives

The primary objective of this study is to assess the significances of non-hdl cholesterol in the diabetic population and its relation with cardiovascular risk among patients attending diabetic clinic.

Methods

This is the study conducted on diabetic population who are all diagnosed as type 2 diabetes mellitus as per ADA 2015 criteria and attending diabetic clinic at Government Vellore Medical College Hospital, vellore. This cross sectional study on significance of non-HDL cholesterol in diabetic population and its relation to cardiovascular risk which calculated through ASCVD risk scoring system.

Results This study is conducted on diabetic population attending diabetic clinic at government vellore medical college , involves totally 100 subjects of which 54 were males and 46 were females. Most of them were in the age ranging from 50 to 60 years which includes 49 subjects and with mean age was 55 years. Among those 100 subjects , elevated 10 year risk for cardiovascular disease calculated through ASCVD risk assessment was present in 68 subjects. In this study of 100 diabetic population, 58 subjects had non-HDL cholesterol above their target . In these 58 subjects , 56 subject has elevated 10 year risk for cardiovascular disease as calculated through ASCVD risk scoring system. They are statistically significant with P value of 0.0001 (<0.05). This study shows results after dividing the study population based on the TGLs concentration above and below 200 mg /dl. The results shows, in population with TGLs concentration less than 200 mg / dl both LDLc and non-HDL cholesterol was good in assessing CVD risk while in population with TGLs concentration more than 200 mg/dl only non-HDL cholesterol was very good in assessing CVD risk but LDLc was not significant in assessing CVD risk. Thus in both groups non –HDL cholesterol was very good in anticipating 10 year risk for cardiovascular disease.

Conclusion: The result of this study suggest that non-HDL cholesterol may be superior in predicting CVD especially in people with diabetes where TGLs are elevated.

Keywords: type 2 diabetes mellitus, non – HDL cholesterol , cardiovascular disease